

# A JOURNEY IN OTHER WORLDS

By Col. John Jacob Astor

This is the Only Book Col. Astor Wrote. It Is Published Serially in The Evening World by Authority of the Trustees of the Astor Estate—"A Journey in Other Worlds" Is a Fantastic, Semi-Scientific Tale of Four Explorers' Startling Adventures Among the Planets.

**CHAPTER IV.**  
**Heavenly Bodies.**

THE head was only a few miles in diameter, for it was a small comet, and was composed of grains and masses of stone and meteoric iron. Many of the grains were no larger than peas or mustard seeds; no mass was more than four feet in diameter, and all of them had very irregular shapes. The space between the particles was never less than one hundred times their masses.

"We can move about within it," said Ayraut, as the Callisto entered the atmosphere of particles and moved slowly forward among them. The windows in the dome, being made of toughened glass, set somewhat slantingly so as to deflect anything touching them, and having, moreover, the pressure of the inside air to sustain them, were fairly safe, while the windows in the sides and base were but little exposed. Whenever a large mass seemed dangerously near the glass, they applied an aspergillum to it and sent it hurtling among its fellows. At these times the Callisto recoiled slightly, also, the resulting motion in either being in inverse ratio to its weight. There was constant and incessant movement among the individual fragments, but it was not rotary. Nothing seemed to be revolving about anything else; all were moving, apparently swerving back and forth, but no collisions took place. When the separate particles got more than a certain distance apart they reapproached one another, but when seemingly within one hundred diameters of each other they swung off in some other direction. After a time the Callisto seemed to become endowed with the same property that the fragments possessed; for it and they repelled one another, on a near approach, after which nothing came near.

Much of the material was like slag from a furnace, having evidently been partly fused. Whether this heat was the result of collision or of its own proximity to the sun at perihelion they could not tell, though the latter explanation seemed most simple and probable. When at about midnight, not twilight, for any ray that succeeded in penetrating was dazzlingly brilliant, and the shadows, their own included, were fairly black. As they approached the farther side and the sunlight decreased, they found that a diffused luminosity pervaded everything. It was sufficiently bright to enable them to see the dark side of the meteoric masses, and, on coming from the nucleus in total darkness, they found the shadow stretching thousands of miles before them into space.

"I now understand," said Bearwarden, "why stars of the sixth and seventh magnitude can be seen through thousands of miles of a comet's tail. It is simply because there is nothing in it. The reason any stars are obscured is because the light in the tail, however faint, is brighter than they, and that light is all that the casual appendage consists of, though what produces it I confess I am unable to explain. I also see why the tail always stretches away from the sun, because near by it is overwhelmed by the more powerful light; in fact, I suspect it is principally in the comet's shadow that the tail is visible. It is strange that no one ever thought of that before, or that any one feared the earth's passing through the tail of a comet. It is obvious to me now that if there were any material substance, any gas, however rarefied, in this hairlike appendage, it would immediately fall to the comparatively heavy head and surround that as a center."

"How, then," asked Cortlandt, "do you account for the spaces between those stones? However slight gravitation might be between some of the grains, if it existed at all, or was imposed by some other force, with sufficient time, and they have eternity—every comet

would come together like a planet into one solid mass. Perhaps some similar force maintains gases in the distended tail, though I know of no such, or even any analogous manifestation on earth. If the law on which we have been brought up, that every atom in the universe attracts every other atom, were without exceptions or modifications, that comet could not continue to exist in its present form. Until we get some additional illustration, however, we shall be short of data with which to formulate any iconoclastic hypothesis. The source of the light, I must admit, also puzzles me greatly. There is certainly no heat to which we can attribute it."

Having gone beyond the fragments, they applied a strong repulsion charge to the comet, creating thereby a perfect whirlpool among its particles, and quickly left it. Half an hour later they again shut off the current, as the Callisto's speed was sufficient. For some time they had been in the belt of asteroids, but as yet they had seen none near. The morning following their experience with the comet, however, they went to their observatory about breakfast as usual, and, on pointing their glasses forward, espied a comparatively large body before them, a little to their right.

"That must be Pallas," said Cortlandt, scrutinizing it closely. "It was discovered by Olbers in 1802, and was the second asteroid found. Ceres having been the first, in 1801. It has a diameter of about three hundred miles, being one of the largest of these small planets. The most wonderful thing about it is the inclination of its orbit—thirty-five degrees—to the plane of the ecliptic, which means that at each revolution in its orbit it swings that much above and below the imaginary plane cutting the sun at its equator, from which the earth and other planets vary but little.

This no doubt is due to the near approach and disturbing attraction of some large comet, or else it was flung above or below the ordinary plane in the catastrophe that we think befell the large planet that doubtless formerly existed where we now find this swarm. You can see that its path makes a considerable angle to the plane of the ecliptic, and that it is now about crossing the line."

It soon presented the phase of a half moon, but the waviness of the straight line, as in the case of Venus and Mercury, showed that the size of the mountains must be tremendous compared with the mass of the body, some of them being obviously fifteen miles high. The catastrophe that we think befell the planet, convinced them there was no trace of atmosphere.

"There being no air," said Cortlandt, "it is safe to assume there is no water, which helps to account for the great irregularities on the body's surface, since the mountains will seem higher when surrounded by dry ocean bottom than they would if water came half way up their sides. Undoubtedly, however, the main cause of their height is the slight effect of gravitation on an asteroid, and the fact that the shrinking of the interior and consequent folding of the crust in ridges may have continued for a time after there was no longer water on the surface to cut them down. They had no genesis, and were part of the same nebulous mass. But this does not include the other systems and nebulae; for, compared with them, our sun, as we have seen, is itself advanced and small beside such stars as Sirius having diameters of twelve million miles."

As they left Pallas between themselves and the sun it became a crescent and finally disappeared.

Two days later they sighted another asteroid exactly ahead. They examined it closely, and concluded it must be Hilda, put down in the astronomer's almanac as No. 13, and having almost the greatest mean distance of any of these small bodies from the sun.

When they were so near that the disk plainly visible to the naked eye, Hilda passed between them and Jupiter, eclipsing it. To their surprise, the light was not instantly shut off, as when the moon occults a star, but there was evident refraction.

"By George!" said Bearwarden, "there is an asteroid that has an atmosphere."

"There was no mistaking it. They soon discovered a small ice-cap at one pole, and then made out oceans and continents, with mountains, forests, rivers and green fields. The sight lasted but a few moments before they swept by, but they secured several photographs and carried a vivid impression in their minds."

**CHAPTER V.**  
**Preparing to Alight.**

THAT afternoon Ayraut brought out some statistical tables he had compiled from a great number of books and also a diagram of the comparative sizes of the planets. "I have been not a little puzzled at the discrepancies between even the best authors," he said, "scarcely any two being exactly alike, while every decade has seen accepted theories radically changed."

Which, he spread out the result of his labors, which the three friends then studied. "You see," Ayraut explained, "on Jupiter we shall need our aspergillum to enable us to make long marches, while on Saturn they will not be necessary, the increase in our weight as a result of that planet's size being considerably less than the usual load carried by the Roman soldier."

"I do not imagine," said Cortlandt, "we should long be troubled by gravitation without our aspergillum even on Jupiter, for, though our weight will be more than doubled, we can take of one-quarter of the whole by remaining near the equator, their rapid rotation having apparently been given providentially to all the large planets. Nature will adapt herself to this change, as to all others, very readily. Although the reclamation of the vast areas of the North American Arctic Archipelago, Alaska, Siberia and Antarctic Wilkes Land, from the death grip of the ice in which they have been held will relieve the pressure of population for another century, at the end of that time it will surely be felt again; it is therefore a consolation to feel that the mighty planets Jupiter and Saturn, which we are coming to look upon as our heritage, will not crush the life out of any human beings by their own weight that may alight upon them."

Before going to bed that evening they decided to be up early the next day to study Jupiter, which was already a brilliant object.

The following morning, on awakening, they went at once to their observatory, and found that Jupiter's disk was plainly visible to the naked eye, and before night it seemed as large as the full moon.

Then they prepared to check the Callisto's heading speed, which Jupiter's attraction was beginning to increase. When about two million miles from the great planet, which was considerably on

their left, they espied Callisto ahead and slightly on their right, as Deepwaters had calculated it would be. Applying a mild repulsion to this—which was itself quite a world, with its diameter of over three thousand miles, though evidently as cold and dead as the earth's old moon—they retarded their forward rush, knowing that the resulting motion toward Jupiter would be helped by the giant's pull. Wishing to be in good condition for their landing, they divided the remainder of the night into watches, two going to sleep at a time, the man on duty standing by to control the course and to get photographic negatives, on which, when they were developed, they found two crescent shaped continents, a speckled region and a number of islands. By 7 A. M., according to Eastern standard time, they were but fifty thousand miles from Jupiter's surface, the gigantic globe filling nearly one side of the sky. In preparation for a sally, they got their guns and accoutrements ready, and then gave a parting glance at the car. Their charge of electricity for developing the repulsion seemed scarcely touched, and they had still an abundant supply of oxygen and provisions. The barometer registered twenty-nine inches, showing that they had not lost much air in the numerous openings of the vestibule. The pressure was about what would be found at an altitude of a few hundred feet, part of the rarefaction being no doubt due to the fact that they did not close the windows until at a considerable height above Van Cortlandt Park.

They saw they should alight in a longitude on which the sun had just risen, the rocky tops of the great mountains shining like helmets in its rays. Soon they felt a sharp checking of their forward motion, and saw, from the changed appearance of the stars and the sun, that they had entered the atmosphere of their new home.

Not even did Columbus, standing at the prow of the Santa Maria, with the New World before him, feel the exultation and delight experienced by these latter-day explorers of the twenty-first century.

**CHAPTER VI.**  
**Jupiter.**

JUPITER—the magnificent planet with a diameter of 86,000 miles, having 119 times the surface and 1,300 times the volume of the earth—lay beneath

them. They had often seen it in the terrestrial sky, emitting its strong, steady ray, and had thought of that far-away planet, about which till recently so little

had been known, and a burning desire possessed them to go to it and explore its mysteries. Now, thanks to aspergillum, the force whose existence the ancients suspected, but of which they knew so little, all things were possible. Ayraut manipulated the silk covered

glass handles, and the Callisto moved slowly in comparison with its recent speed, and all remained quiet to their telescopes as they peered through the rushing clouds, now forming and now dissolving before their eyes. What transports of delight, what ecstasies bliss,

was theirs! Men had discovered and mastered the secret of aspergillum, and now, "little lower than the angels," they could soar through space, leaving even planets and comets behind. "Is it not strange," said Dr. Cortlandt, "that though it has been known for over a century that bodies charged with unlike electricities attract one another, and those charged with like repel, no one thought of utilizing the counterpart of gravitation? In the nineteenth century, savants and Indian jugglers performed experiments with their disciples and masses of inert matter, by causing them to remain without visible support at some distance from the ground; and while many of these, of course, were quacks, some were on the right track, though they did not push their research."

President Bearwarden and Ayraut assented. They were steering for an apparently hard part of the planet's surface, about a degree and a half north of its equator.

"Since Jupiter's axis is almost at right angles to the plane of its orbit," said the doctor, "being inclined only about one degree and a half, instead of nearly twenty-three and a half, as was the earth's till so recently, it will be possible for us to have any climate we wish, from constantly warm at the equator to constantly cool or cold as we approach the poles, without being troubled by extremes of winter and summer."

Until the Callisto entered the planet's atmosphere its five moons appeared like silver shields against the black sky, but now things were looking more terrestrial, and they began to feel at home. Bearwarden put down his notebook, and Ayraut returned a photograph to his pocket, while all three gazed at their new abode. Beneath them was a vast continent variegated by chains of lakes and rivers stretching away in all directions except toward the equator, where lay a placid ocean as far as their telescopes could pierce. To the eastward towers towering and massive mountains, and along the southern border of the continent smoking volcanoes, while to-

ward the west they saw forests, gently rolling plains and table-lands that would have satisfied a poet or set an agriculturist's heart at rest.

"I hope we may find some four-legged inhabitants," said Ayraut, thinking of their explosive magazine rifles. "If Jupiter is passing through its Jurassic or Mesozoic period there must be any amount of some kind of game." Just then a quiver shook the Callisto, and glancing to the right they noticed one of the volcanoes in violent eruption. Smoke filled the air in clouds, hot stones and then floods of lava poured from the crater, while even the walls of the hermetically sealed Callisto could not arrest the thunderous crashes that came from the interior of the car resound.

"Had we not better move on?" said Bearwarden, and accordingly they went toward the woods they had first seen. Finding a firm strip of land between the forest and an arm of the sea, they gently grounded the Callisto, and not of its equator.

"Finding they were not inconvenienced by a pressure but little greater than that of a deep coal mine, they opened the port, whereupon their barometer showed a further rise of thirty-two, and then remained stationary. Finding also that the chemical composition of the air suited them, and that they had no difficulty in breathing, the pressure being the same as that sustained by a diver in fourteen feet of water, they opened a door and emerged. (To Be Continued.)



A BATTLE ROYAL ON JUPITER

## Feminine Frivols

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By J. Bryans



"He said I looked pretty enough to eat."

"I hear you met your husband entirely by accident!"

"Yes. He ran over me in his automobile!"

## "S'Matter, Pop?"

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By C. M. Payne.

